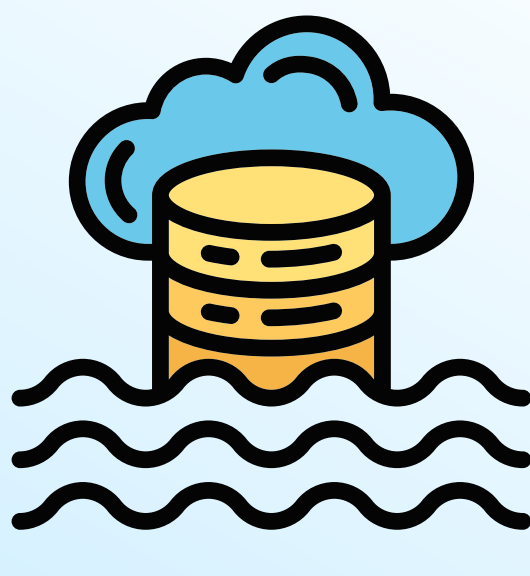


The Lakehouse for Retail: Unified Architecture in One View

A Single Platform to Power Retail AI, Personalization & Real-Time Decision-Making



Databricks Lakehouse for Retail is the first industry-specific lakehouse designed to accelerate data + AI outcomes for retailers.

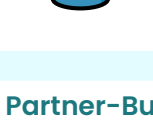
Built on a unified architecture, it combines best-in-class analytics, machine learning, data sharing, and solution accelerators—all to help retailers meet modern customer expectations and stay competitive in the digital-first world.

What Is Lakehouse for Retail?

Lakehouse for Retail brings together technologies, tools, and an ecosystem of partners to create a complete, AI-ready data platform tailored for the retail industry.

It is built on 4 core building blocks:

Unified Data + AI Platform



- Ingest and unify structured and unstructured data at scale
- Deliver real-time insights and accurate analytics
- Enable powerful AI models across the retail value chain

Partner-Built Retail Solutions



- Pre-built use case accelerators from leading partners
- Accelerate time-to-value with trusted, retail-tested architectures

Industry Data Sharing & Collaboration



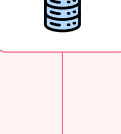
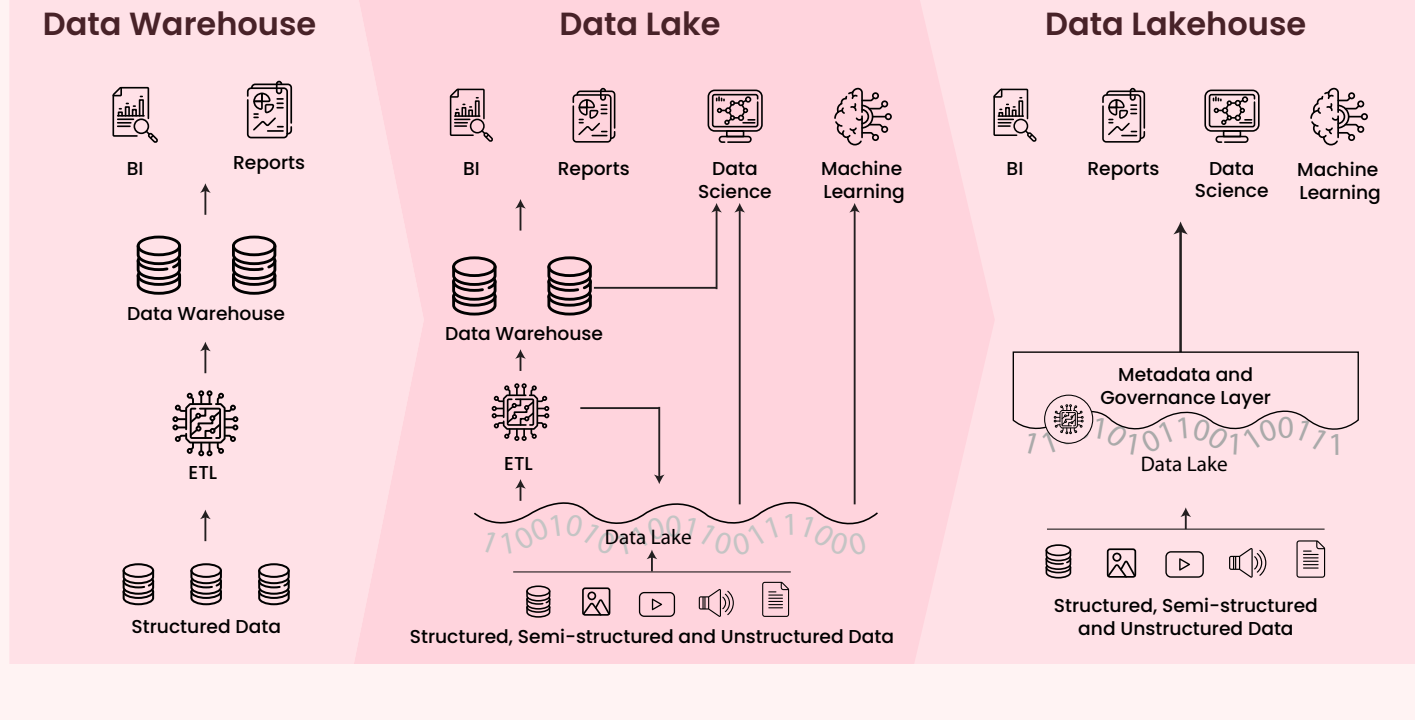
- Secure, real-time data exchange with partners, suppliers & agencies
- Unlock shared insights across the ecosystem

Retail Solution Accelerators



- Ready-to-deploy tools for demand forecasting, personalization, inventory insights, and more
- Designed to help teams adopt Lakehouse fast and deliver measurable impact

Lakehouse Architecture for Retail (Illustrated as a Unified Stack)



Data Ingestion & Sources

(Where your retail data comes from)

- Point-of-sale (POS) systems
- Ecommerce platforms
- CRM and loyalty apps
- ERP and supply chain systems
- Smart shelves, IoT devices, and sensors
- External sources (marketplaces, distributors, agencies)

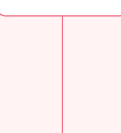
Supports both batch and streaming data pipelines for always-on visibility.



Unified Storage – Delta Lake

(Where your data lives)

- Open-format storage layer (Parquet, JSON, etc.)
- ACID compliance and versioned data
- Single source of truth for analytics, BI, and ML

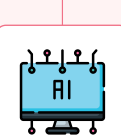


Governance & Collaboration Layer

(Where security meets innovation)

- Fine-grained access controls
- Built-in privacy and compliance tools (GDPR, CCPA)
- Open data sharing across partners, retailers & distributors
- Rich metadata, cataloging, and lineage

Enables seamless yet secure collaboration across the retail value chain.



Compute & AI Layer

(Where intelligence happens)

- SQL analytics and dashboards
- Machine learning and real-time personalization
- Predictive models for demand, churn, inventory
- Streaming analytics and customer behavior tracking

Make faster, smarter decisions using the full power of your data.



Application & Consumption Layer

(Where your teams take action)

- Executive dashboards
- Personalized marketing systems
- Store operations & supply chain tools
- Real-time alerts and reporting
- Third-party integrations (Power BI, Tableau, Salesforce)

Make faster, smarter decisions using the full power of your data.

Why Retailers Are Turning to the Lakehouse

Modern retail challenges demand a modern architecture. Retailers today face:



A massive **shift to e-commerce** and omnichannel complexity

Rapidly evolving **consumer preferences**

A need for **real-time decisions**, not delayed reports

The inability to tap into **90% of unstructured data**

Lack of **open collaboration** with partners and suppliers

The Lakehouse addresses these challenges with one flexible, AI-powered platform.

Key Retail Use Cases Enabled by the Lakehouse

Use Case

Value Delivered

Customer 360

Unify all customer touchpoints into one profile for omnichannel personalization

Personalization at Scale

Trigger real-time recommendations and offers across digital and physical channels

Demand Forecasting

Predict product needs to optimize inventory and reduce overstock or stockouts

Store Operations Optimization

Use IoT and footfall data to adjust staffing and layout

Order Fulfillment & Picking

Real-time insight into product availability and logistics efficiency

Campaign Intelligence

Analyze campaign effectiveness and optimize marketing spend dynamically

Benefits for Retailers

Immediate Benefits



Real-Time Insights:
No more delays in inventory, pricing, or customer data



Actionable AI:
Predict what shoppers want, and when they want it



Reduced Costs:
Replace multiple legacy systems with one unified solution



Faster Rollouts:
Deploy solution accelerators in days, not months

Long-Term Benefits



Stronger Ecosystem Collaboration:
Seamless data sharing with suppliers, distributors, and agencies



Scalable Innovation:
Build and deploy AI/ML models enterprise-wide



Increased Data ROI:
Unlock insights from structured + unstructured data



Retail-First Design:
Built to solve specific retail challenges—not generic problems

The Lakehouse isn't just a new architecture—it's the foundation for the future of retail.

Ready to build yours?

Connect with our Experts

Or contact us to schedule a tailored Lakehouse demo for your team.